

## HUDSON RIVER BASIN

01362200 ESOPUS CREEK AT ALLABEN, NY  
 (National water-quality assessment program station)

LOCATION.--Lat 42°07'01", long 74°22'50", Ulster County, Hydrologic Unit 02020006, on right bank, 20 ft downstream from bridge on Fox Hollow Road, 200 ft downstream from Fox Hollow Creek, 600 ft upstream from Peck Hollow Creek, and 0.5 mi west of Allaben. Water-quality sampling site at discharge station.

DRAINAGE AREA.--63.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year. Prior to October 1988, published as "at Shandaken" (01362198).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 998.04 ft above NGVD of 1929. Prior to November 22, 1988, at site 0.5 mi upstream at datum 19.23 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional slight regulation when filling or draining swimming pools or small ponds upstream from station. Satellite and telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft<sup>3</sup>/s, Apr. 4, 1987, gage height, 13.70 ft, from floodmarks, site and datum then in use, from rating curve extended above 3,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow, at site 0.5 mi upstream, includes undetermined amount of flow bypassing gage; minimum discharge, 2.1 ft<sup>3</sup>/s, Sept. 16, 1983 (result of slight regulation upstream from station).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 30, 1951 reached a stage of about 15.1 ft, at previous site and datum, from information supplied by local residents, discharge about 20,000 ft<sup>3</sup>/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 27	1745	3,620	8.61	Dec 24	1800	2,830	7.87
Oct 29	1015	2,940	7.98	May 13	1800	1,940	6.92
Nov 20	0545	1,300	6.11	Sep 18	1045	a*6,700	b*10.91
Dec 11	1545	2,560	7.59				

a From rating curve extended as explained above.

b Recorded; outside gage height was 11.22 ft, from crest-stage gage.

Minimum discharge, 16 ft<sup>3</sup>/s, Feb. 25, gage height, 3.01 ft, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND  
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	553	453	270	e52	e35	453	259	281	29	178	80
2	357	399	366	248	e50	e50	697	236	251	30	175	72
3	304	323	313	255	e49	e90	534	239	214	26	144	66
4	309	285	283	284	e47	146	433	216	192	25	121	62
5	294	262	252	308	e46	202	340	200	175	27	136	58
6	262	244	232	292	e47	678	290	187	167	29	105	54
7	236	219	203	264	e60	714	260	173	151	28	91	50
8	211	198	180	e220	e50	535	231	161	134	33	81	56
9	188	181	160	e170	e44	380	207	155	116	26	72	191
10	169	169	153	e150	e44	308	184	151	109	24	65	210
11	153	169	1,260	e150	e42	275	167	153	94	22	58	175
12	139	162	1,130	e180	e40	251	155	136	85	22	249	147
13	124	155	682	e140	e39	216	226	413	77	23	761	126
14	116	139	504	e110	e38	192	321	448	72	27	509	111
15	227	129	386	e100	e38	181	307	308	66	74	349	96
16	178	124	301	e110	e37	168	289	255	60	47	351	87
17	175	119	361	e140	e36	157	268	217	58	41	293	264
18	170	115	325	e130	e35	143	257	205	68	42	244	3,580
19	176	189	292	e100	e34	130	247	201	59	45	206	1,460
20	165	1,060	262	e94	e33	126	232	175	50	42	180	773
21	158	752	236	e90	e33	149	214	166	48	38	225	487
22	151	559	219	e84	e32	127	199	150	45	34	195	345
23	142	408	212	e76	e31	116	233	152	41	299	171	287
24	133	344	1,400	e70	e30	116	224	171	37	284	150	241
25	123	319	1,540	e64	e30	120	220	211	37	162	132	201
26	129	274	872	e64	e30	142	324	200	51	118	117	169
27	1,700	239	621	e62	e31	290	365	485	40	144	105	145
28	1,600	323	456	e60	e32	398	353	485	35	225	92	305
29	1,900	656	359	e58	e33	358	315	383	34	236	82	375
30	1,200	556	324	e56	---	314	287	308	31	193	81	337
31	758	---	296	e54	---	298	---	264	---	180	116	---
TOTAL	12,397	9,624	14,633	4,453	1,143	7,405	8,832	7,463	2,878	2,575	5,834	10,610
MEAN	400	321	472	144	39.4	239	294	241	95.9	83.1	188	354
MAX	1,900	1,060	1,540	308	60	714	697	485	281	299	761	3,580
MIN	116	115	153	54	30	35	155	136	31	22	58	50
CFSM	6.28	5.04	7.41	2.26	0.62	3.75	4.62	3.78	1.51	1.30	2.95	5.55
IN.	7.24	5.62	8.55	2.60	0.67	4.32	5.16	4.36	1.68	1.50	3.41	6.20

01362200 ESOPUS CREEK AT ALLABEN, NY—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	92.6	145	171	150	139	253	327	198	110	57.8	39.0	59.4
MAX	400	346	496	557	385	553	827	511	363	212	215	421
(WY)	(2004)	(1973)	(1974)	(1996)	(1981)	(1977)	(1993)	(1989)	(1973)	(1996)	(2003)	(2003)
MIN	4.16	5.58	39.3	19.4	29.6	69.9	123	67.3	19.4	8.94	6.30	4.23

(WY)	(1965)	(1965)	(1999)	(1981)	(1987)	(1970)	(1995)	(1987)	(1965)	(1965)	(1964)	(1964)
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SUMMARY STATISTICS

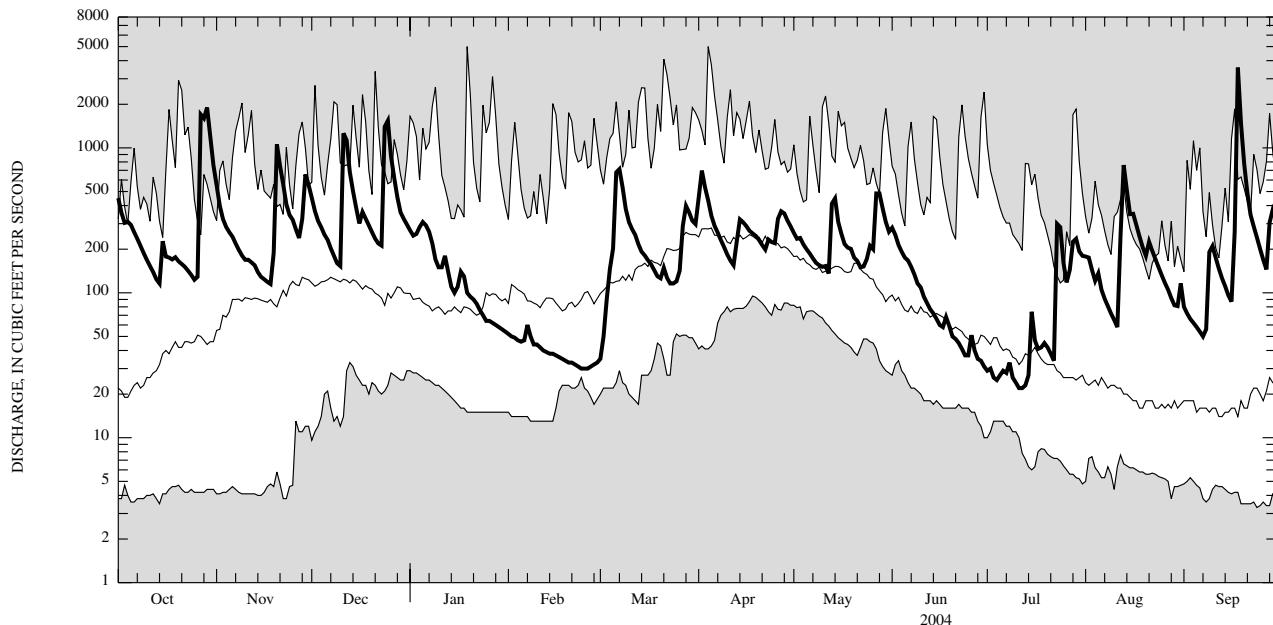
FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1964 - 2004

ANNUAL TOTAL	94,650	87,847										
ANNUAL MEAN	259	240										
HIGHEST ANNUAL MEAN												
LOWEST ANNUAL MEAN												
HIGHEST DAILY MEAN	1,900	Oct 29	3,580	Sep 18	5,000	Apr 4, 1987						
LOWEST DAILY MEAN	31	Jul 20	22	Jul 11	3.3	Sep 24, 1964						
ANNUAL SEVEN-DAY MINIMUM	36	Jul 15	25	Jul 8	3.5	Sep 22, 1964						
ANNUAL RUNOFF (CFSM)	4.07		3.77		2.28							
ANNUAL RUNOFF (INCHES)	55.27		51.30		30.96							
10 PERCENT EXCEEDS	611		449		316							
50 PERCENT EXCEEDS	167		171		81							
90 PERCENT EXCEEDS	54		38		14							

e Estimated



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.  
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

01362200 ESOPUS CREEK AT ALLABEN, NY—Continued

## WATER-QUALITY RECORDS

**PERIOD OF RECORD.**--Water years 1963-95, October 2000 to August 2004, discontinued. Published as Esopus Creek at Shandaken (01362198), October 1963 to September 1988, October 1989 to August 1992 (non-daily record).

**CHEMICAL DATA:** 1963 (a), 1964 (b), 1965 (a), 1966 (b), 1967 (c), 1968-82 (d), 1983 (c), 1984 (b), 1985 (c), 1986 (b), 1987 (a), 1988-92 (b), 1993 (c), 1994 (d), 1995 (c), 2001 (d), 2002-04 (c).

**MINOR ELEMENTS DATA:** 1964 (b), 1965, 1967-73, 1975-76 (a), 1977 (b), 1978-84 (a), 1985-86 (b), 1987 (a), 1988-92 (b), 1993 (a).

**RADIOCHEMICAL DATA:** 1967-77, 1979-85, 1988-92 (a).

**PESTICIDE DATA:** 1967-71 (a), 1972 (b), 1974-77, 1979-82, 1993-94 (a), 2001 (d).

**ORGANIC DATA:** OC--1972, 1974, 1979 (a), 1981-82, 1993 (c), 1994 (d), 1995 (c). PCB--1972, 1974-77, 1979-82, 1993 (a). PCN--1977, 1979-82, 1993 (a).

**NUTRIENT DATA:** 1963 (a), 1964 (b), 1965 (a), 1966 (b), 1967 (c), 1968-82 (d), 1983 (c), 1984 (b), 1985 (c), 1986 (b), 1987 (a), 1988-92 (b), 1993 (c), 1994 (d), 1995 (c), 2001 (d), 2002-04 (c).

**BIOLOGICAL DATA:** Bacteria--1968-69 (d), 1970-72 (c), 1973-82 (d), 1983-85 (b), 1986-88 (a), 1990-92 (b), 1993 (a). Benthic invertebrate--1993-95 (a). Fish community--1993-95 (a). Phytoplankton--1993 (a).

**SEDIMENT DATA:** 1969 (d), 1970-71 (c), 1972-73 (d), 1974 (c), 1975, 1977-78 (d), 1979 (c), 1980-82 (d), 1983-86, 1988-92 (b), 1993 (c), 1994 (d), 1995 (c), 2001 (d), 2002-04 (c).

**PERIOD OF DAILY RECORD.**--

**WATER TEMPERATURE:** July 1963 to July 1968, January 1970 to May 1994, February to September 1995. Prior to October 1988, published as Esopus Creek at Shandaken (01362198).

**REMARKS.**--A sampling method code of 10 indicates an equal-width increment sample, 60 indicates a weighted-bottle sampler.

**EXTREMES FOR PERIOD OF DAILY RECORD.**--

**WATER TEMPERATURE:** Maximum (water years 1963-76, 1978-80, 1982, 1985-86, 1989-93), 28.5°C, Aug. 16, 1965, Aug. 9, 1980, July 10, 1993; minimum, 0.0°C on many days during winter periods except water years 1967 and 1976.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO <sub>3</sub> (39086)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)
OCT 14...	1055	116	10	732	11.6	12	7.1	50	20.0	9.5	11	3.70	5.0
DEC 01...	1340	447	60	731	11.9	96	6.9	27	3.0	5.5	7	2.05	4.9
FEB 05...	1130	e46	10	749	15.0	101	6.4	58	2.0	.0	10	6.09	5.5
APR 07...	1145	263	60	729	12.4	99	7.1	53	14.0	5.0	8	6.64	3.9
APR 07...*	1146	263	60	--	--	--	--	--	--	--	--	6.68	3.5
JUN 08...	1025	139	60	739	10.9	106	7.2	55	28.5	14.0	11	5.19	4.7
AUG 03...	1600	137	10	731	9.4	103	7.2	48	31.5	20.0	11	3.89	4.5

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Suspended sediment concentration mg/L (80154)
OCT 14...	<.04	.06	<.008	E.003	.008	.08	1
DEC 01...	<.04	.26	<.008	E.003	.011	.32	4
FEB 05...	<.04	.30	<.008	<.006	.009	.36	1
APR 07...	<.04	.52	<.008	<.006	E.004	.53	2
APR 07...*	<.04	.52	<.008	<.006	.004	.56	2
JUN 08...	<.04	.19	<.008	E.003	.010	.24	5
AUG 03...	--	--	--	--	.007	.23	3

e Estimated daily

\* Replicate

E Estimated